

1 WHAT IS CLAIMED IS:

2 1. (Cancelled) An arrangement of a tool insertable into the mouth of a
3 house for the care and maintenance of teeth while providing
4 protection of soft tissue within the mouth of the horse and comprising
5 in combination:

6 an electric rotary motor having a means to hold said tool along the axis
7 of rotation of said motor, said tool having a tooth cutting surface of
8 a preselected size and shape;

9 a shaft having one end mounted to said cutting surface and the other
10 end attachable to said motor holding means thereby supplying
11 rotational motion to said tool;

12 a shaft support means through which said shaft may be removably
13 inserted;

14 a hand piece having a channel through which said shaft support means
15 is removably insertable; and,

16 a cutting surface guard fabricated as a portion of said hand piece and
17 shaped to be in encircling relation about a selected portion of said
18 cutting surface thereby exposing only a portion of said cutting
19 surface under the condition of said shaft support means, having
20 said shaft inserted therein, is mounted within said shaft support
21 channel of said hand piece and said shaft engaged within said
22 holding means thereby allowing a user of the arrangement to guide
23 said hand piece containing the partially guarded tool into the
24 mouth of the horse to separate said soft tissue from a preselected
25 portion of a tooth with said cutting surface guard and position the
26 unguarded portion of said cutting surface against a tooth to remove
27 a selection portion of said tooth by means of said tool in rotary
28 motion.

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1 2. (Currently Amended) An arrangement of a tool insertable into the
2 mouth of a horse for the care and maintenance of teeth while
3 providing protection of soft tissue within the mouth of the horse and
4 comprising in combination:
5 an electric rotary motor having a means to hold said tool along the axis
6 of rotation of said motor, said tool having a tooth cutting surface of
7 a preselected size and shape;
8 a shaft having one end mounted to said cutting surface and the other
9 end attachable to said motor holding means thereby supplying
10 rotational motion to said tool;
11 a shaft support having a bearing mounted at a preselected position
12 within said shaft support means and a bearing seal mounted at a
13 position between said bearing and said cutting surface through
14 which said shaft may be inserted and supported for rotary motion
15 without binding;
16 a hand piece having a channel through which said shaft support means
17 is removably insertable; and,
18 a cutting surface guard fabricated as a portion of said hand piece and
19 shaped to be in encircling relation about a selected portion of said
20 cutting surface thereby exposing only a portion of said cutting
21 surface under the condition of said shaft support means, having
22 said shaft inserted therein, is mounted within said shaft support
23 channel of said hand piece and said shaft engaged within said
24 holding means thereby allowing a user of the arrangement to guide
25 said hand piece containing the partially guarded tool into the
26 mouth of the horse to separate said soft tissue from a preselected
27 portion of a tooth with said cutting surface guard and position the
28 unguarded portion of said cutting surface against a tooth to remove
29 a selection portion of said tooth by means of said tool in rotary
30 motion.

1 3. The arrangement defined in claim 2 further comprising a brass sleeve
2 mountable around said shaft under the condition of said shaft being
3 inserted through said bearing and bearing seal into said shaft
4 support means, said brass sleeve providing separation between said
5 shaft and said shaft support means.

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7 4. (Cancelled) The arrangement defined in claim 1 further comprising a
8 flexible shaft having one end adaptively mountable to said motor
9 thereby supplying rotational motion to said flexible shaft and the
10 other end having a means to hold said tool along the axis of rotation
11 of the flexible shaft thereby separating said motor from said tool so
12 that said motor may be supported at a position remote from said tool.

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14 5. (Cancelled) The arrangement defined in claim 1 further comprising
15 preselected sized and shaped extended guards mountable to said
16 cutting surface guard to provide additional separation between said
17 cutting surface and said soft tissue within the mouth of the horse.

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19 6. (Cancelled) The arrangement defined in claim 1 wherein said hand
20 piece further comprises an orifice formed near said cutting surface
21 and a second channel one end in communication with said orifice,
22 the other end adapted to be removably attachable to a vacuum source
23 whereby the dust and debris created by the removal of a selected
24 portion of a tooth may first enter said orifice and then said second
25 channel to be sucked out of the mouth of the horse and deposited
26 into said vacuum source.

27

28 7. The arrangement in claim 2 wherein said shaft support means further
29 comprises gearing means mounted within said shaft support means
30 and in communication with said shaft to change the rotational

1 motion of said shaft attached to said motor holding means into
2 reciprocating motion which may be applied to said cutting surface
3 mounted on said shaft remote from said gearing means.
4

5 8. The arrangement in claim 2 wherein said shaft support means further
6 comprises gearing means mounted within said shaft support means
7 and in communication with said shaft to change the profile of the
8 shaft by a preselected angle thereby increasing the range of
9 placement of said cutting surface of said tool.
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11 9. (Cancelled) The arrangement in claim 4 wherein said adaptive
12 mounting of said flexible shaft is to a motor owned by the user.
13

14 10. (Cancelled) The arrangement in claim 4 wherein said means to hold
15 said tool is a handle owned by the user, said flexible shaft having
16 means to adaptively mount said handle on the end of said flexible
17 shaft under the condition of said shaft mounted within said handle.
18

19 11. (Cancelled) The arrangement in claim 4 further comprising a clutch
20 mounted with one end in communication with said motor and
21 another end remote from said motor in communicated with said
22 flexible shaft thereby providing interruptible transmission of motion
23 from said motor to said cutting surface in communication with said
24 flexible shaft.
25

26 12. (Currently Amended) An arrangement of a tool insertable into the
27 mouth of a horse for the care and maintenance of teeth while
28 providing protection of soft tissue within the mouth of the horse and
29 comprising in combination:

1 an electric rotary motor having a means to hold said tool along the axis
2 of rotation of said motor, said tool having a tooth cutting surface of
3 a preselected size and shape;
4 a shaft having one end mounted to said cutting surface and the other
5 end attachable to said motor holding means thereby supplying
6 rotational motion to said tool;
7 a shaft support means having a bearing mounted at a preselected
8 position within said shaft support means and a bearing seal
9 mounted at a position between said bearing and said cutting surface
10 through which said shaft may be inserted and supported for rotary
11 motion without binding;
12 a hand piece having a channel through which said shaft support means
13 is removably insertable; and,
14 a cutting surface guard fabricated as a portion of said hand piece and
15 shaped to be in encircling relation about a selected portion of said
16 cutting surface thereby exposing only a portion of said cutting
17 surface under the condition of said shaft support means, having
18 said shaft inserted therein, is mounted within said shaft support
19 channel of said hand piece and said shaft engaged within said
20 holding means thereby allowing a user of the arrangement to guide
21 said hand piece containing the partially guarded tool into the
22 mouth of the horse to separate said soft tissue from a preselected
23 portion of a tooth with said cutting surface guard and position the
24 unguarded portion of said cutting surface against a tooth to remove
25 a selection portion of said tooth by means of said tool in rotary
26 motion;
27 a flexible shaft having one end adaptively mountable to said motor
28 thereby supplying rotational motion to said flexible shaft and the
29 other end having a means to hold said tool along the axis of rotation
30 of the flexible shaft thereby separating said motor from said tool so

1 that said motor may be supported at a position remote from said
2 tool;
3 a clutch mounted with one end in communication with said motor and
4 another end remote from said motor in communicated with said
5 flexible shaft thereby providing interruptible transmission of motion
6 from said motor to said cutting surface in communication with said
7 flexible shaft said clutch further comprises means to adjust the
8 threshold of torque at which said motion is interrupted.
9

10 13. (Original) The arrangement in claim 12 further comprising a clutch
11 housing mountable to said motor thereby enclosing said clutch and
12 having a mounting to retain one end of said flexible shaft in
13 communication with said clutch, said clutch housing having an
14 means for access by the user to the means to adjust the torque.
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16 14. (Cancelled) The arrangement in claim 1 wherein said hand piece and
17 guard are fabricated from aluminum.
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19 15. (Cancelled) The arrangement in claim 14 wherein the exposed
20 surfaces of said aluminum are anodized.
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22 16. (Original) An electric motor powered arrangement insertable into the
23 mouth of a horse for the care and maintenance of equine teeth while
24 providing protection of soft tissue within the mouth of the horse and
25 comprising in combination:

26 a tool having a tooth material removal surface;
27 a shaft having a first end mounted to said tool and a second end
28 attachable to said electric motor whereby said tooth material
29 removal surface has a powered motion;
30 a hand piece fabricated with an internal shaft channel;

- 1 a bearing support sleeve;
2 at least one bearing mounted within said support sleeve at a
3 preselected position whereby said bearing accepts the insertion of
4 said shaft through said bearing thereby exposing the end of said
5 shaft remote from said tooth removal surface, said bearing support
6 sleeve mounted with said internal shaft channel whereby said
7 exposed end of said shaft is attachable to said electric motor, said
8 bearing providing support for said shaft under the condition of said
9 tooth material removal surface tool being guided into contact with a
10 preselected tooth and pressed against the tooth until a preselected
11 portion of the tooth is removed while said tooth material removal
12 surface is under powered motion;
- 13 a protective shield fabricated as part of said hand piece at a
14 preselected position and shaped to expose a preselected portion of
15 said tooth material removal surface of said tool retained within said
16 hand piece, said exposed portion guided into contact with a
17 preselected portion of the tooth whereby the remaining non-exposed
18 surface is separated from other portions of the horses mouth
19 including said soft tissue; and,
- 20 a sleeve mountable over said shaft within said shaft hand piece
21 whereby said sleeve provides additional bearing means between said
22 shaft and said hand piece without binding.
- 23
- 24 17. (Original) The arrangement defined in claim 16 wherein said bearing
25 support sleeve means further comprises a bearing mounted at a
26 preselected position within said bearing support sleeve and a
27 bearing seal mounted at a position between said bearing and said
28 cutting surface through which said shaft may be inserted and
29 supported for rotary motion without binding.
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1 18. (Original) The arrangement defined in claim 16 further comprising a
2 flexible shaft having one end adaptively mountable to said motor
3 thereby supplying rotational motion to said flexible shaft and the
4 other end having a means to hold said tool along the axis of rotation
5 of the flexible shaft thereby separating said motor from said tool so
6 that said motor may be supported at a position remote from said
7 tool.

8
9 19. (Original) The arrangement defined in claim 16 further comprising
10 preselected sized and shaped extended guards mountable to said
11 cutting surface guard to provide additional separation between said
12 cutting surface and said soft tissue within the mouth of the horse.

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14 20. (Original) The arrangement defined in claim 19 wherein said
15 extended guard further comprises an orifice formed near said
16 cutting surface and a vacuum channel one end of which is in
17 communication with said orifice, the other end of said vacuum
18 channel adapted to be removably attachable to a vacuum source
19 whereby the dust and debris created by the removal of a selected
20 portion of a tooth may first enter said orifice and then said channel
21 to be sucked out of the mouth of the horse and deposited into said
22 vacuum source.

23
24 21. (Original) The arrangement in claim 16 wherein said bearing support
25 sleeve further comprises gearing means mounted within said
26 bearing support sleeve and in communication with said shaft to
27 change the rotational motion of said shaft attached to said motor
28 holding means into reciprocating motion which may be applied to
29 said cutting surface mounted on said shaft remote from said gearing
30 means.

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2 22. (Original) The arrangement in claim 16 wherein said bearing support
3 sleeve further comprises gearing means mounted within said
4 bearing support sleeve and in communication with said shaft to
5 change the profile of the shaft by a preselected angle thereby
6 increasing the range of placement of said cutting surface of said
7 tool.

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9 23. (Original) The arrangement in claim 18 wherein said adaptive
10 mounting of said flexible shaft is to a motor owned by the user.

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12 24. (Original) The arrangement in claim 18 wherein said means to hold
13 said tool is a handle owned by the user, said flexible shaft having
14 means to adaptively mount said handle on the end of said flexible
15 shaft under the condition of said shaft mounted within said handle.

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17 25. (Original) The arrangement in claim 18 further comprising a clutch
18 mounted with one end in communication with said motor and
19 another end remote from said motor in communicated with said
20 flexible shaft thereby providing interruptible transmission of motion
21 from said motor to said cutting surface in communication with said
22 flexible shaft.

23

24 26. (Original) The arrangement in claim 25 wherein said clutch further
25 comprises means to adjust the threshold of torque at which said
26 motion is interrupted.

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28 27. (Original) The arrangement in claim 26 further comprising a clutch
29 housing mountable to said motor thereby enclosing said clutch and
30 having a mounting to retain one end of said flexible shaft in

1 communication with said clutch, said clutch housing having an
2 means for access by the user to the means to adjust the torque.

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4 28. (Original) The arrangement in claim 16 wherein said hand piece and
5 guard are fabricated from aluminum.

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7 29. (Original) The arrangement in claim 28 wherein the exposed
8 surfaces of said aluminum are anodized.